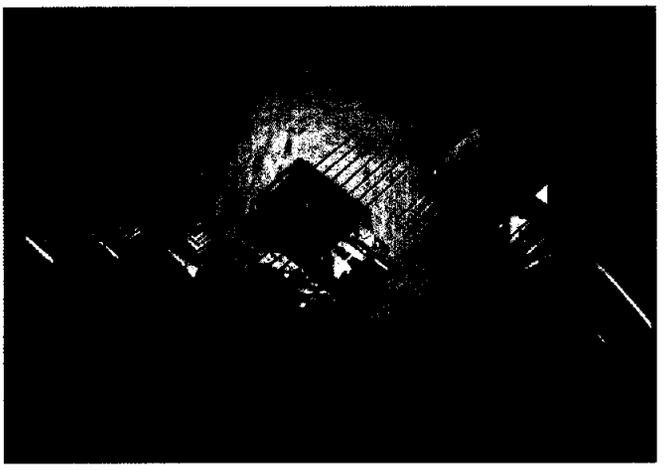
2.5 W multi-mode pump lasers

Spectra-Physics Inc (Mountain View, CA, USA) has launched a new series of multi-mode pump lasers that delivers up to 2.5 W of power (twice the amount previously available). The lasers are available at 915 nm (for pumping Raman fibre lasers) and 975 nm (for co-doped EDFA pumping) in a wide variety of configurations (to simplify integration).

Standard packages include both chips on sub-mount and lensed chips on sub-mount, as well as hermetically sealed, fibre-coupled, industry-standard, 14-pin butterfly packages. Fibre-coupled versions use a 105 µm core, 0.15 NA fibre, and deliver 2 W of output. Both thermo-electrically cooled and uncooled versions are available.

Custom packages can readily be optimized for specific applications.

* At end-September majority stockholder **Thermo Electron Corp** said that it was delaying the start of its cash tender offer of all outstanding shares of Spectra-Physics stock while it reevaluates the price of US$20.00 per share following the September 11 terrorist attacks. Thermo Electron aims to increase its equity ownership from about 80% to at least 90%, after which it will acquire all remaining shares through a "short-form" merger (with stockholders not participating in the tender offer receiving US$20.00 per share).



Pictured - Spectra-Physics' new 2.5 W multi-mode pump laser.

€7m funding for photonic IC maker

Opto start-up **ThreeFive Photonics** (Delft, The Netherlands) - which develops InP-based devices that integrate multiple optical functions into complete network subsystems on a single chip - has completed its 1st round of funding (€7m comes from venture capital companies Atlas Venture and Gilde IT Fund - one of the largest venture capital funds in Europe - which also provided the seed capital in early 2001).

"This will enable us to complete the development of our first chip, codenamed Argo [with a working prototype by end-2001], and to prepare it for production [in 2002]," says CEO and co-founder Wouter Deelman.

Worldwide, telecom network operators are under severe pressure to reduce their investments in network equipment, which drives their suppliers to develop systems that yield improved functionality at a lower price.

ThreeFive Photonics was spun-off in February from the Photonic Integrated Circuits group of the Delft University of Technology, where four of the five founders completed their PhDs and where, in 1987, Professor Meint Smit developed the Phased Array Demultiplexer (PHASAR, or Arrayed Waveguide Grating), a fundamental building block for optical devices.

The team has completed world-leading research projects in integrated optics, including delivering some of the world's smallest and most integrated devices.

The Board of Directors now includes Dimmes Doornhein (chairman), Gilde IT Fund director Anton Arts and Atlas Venture general partner Gerry Montanus, plus:

- Kees Steenbergen, Product Manager (ex-Lucent R&D, where he worked on high-speed integrated detectors, gaining a doctorate from Delft University in 1997);
- Peter Harmsma, Product Development, from Delft University (where he gained a doctorate on the integration of semiconductor optical amplifiers with passive waveguide devices);
- Jiri Stulemeijer, Product Development, who is working towards a doctorate in photonics integrated circuits (including the development of spot-size converters for improved packaging).

NECSEL-based metro pump laser modules

Novalux Inc (Sunnyvale, CA, USA) is shipping beta samples of a second suite of products - high-performance 100 and 200 mW pump lasers for 980 nm EDFA systems for metro networks - based on its NECSEL (Novalux Extended Cavity Surface Emitting Laser) technology.

Current metro pump lasers are based on more complicated and expensive edge-emitting technology made for demanding long-haul networks. "*Cost and space are critical drivers for the growth of optical physical layers in the metro market*," says RHK senior analyst Daryl Inniss. "Because of its unique waveguide design the pump does not require a fiber Bragg grating for wavelength stabilization or an in-line isolator, factors which can reduce both the cost and space required of optical amplifiers."

The NECSEL produces a high-power circular beam from the chip's surface, enabling "mass test" before costly packaging.

The need for optimization of band and single-channel amplifiers for metro has raised interest for low-cost pump lasers and network components. The component's high cost has been a great obstacle to using fibre that is installed but not used. The availability of low-cost pumps and smaller, more efficient amplifiers, as well as other components, will be important to the turn-around of the sector.

* Novalux has appointed:
- Jane Li (formerly Corning Optical Fiber's marketing & sales director for metro applications) as vp of marketing and sales;
- Dr John McInerney as senior manager of R&D (from professor and head of the physics department at University College Cork, National University of Ireland).